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(54) Title: EUKARYOTIC BIOSENSOR MAKING USE OF A CALCIUM REGULATED LIGHT EMITTING ENZYME

(57) Abstract: The present invention provides a method of using eukaryotic cells being transformed with a light emitting Ca<sup>2+</sup>-regulated photoprotein gene for determining the presence or absence of at least one toxic substance in a sample and for assisting in the identification of the toxicant(s). More specifically there is provided a toxicity assay for various uses including determining the presence of toxins and in particular heavy metals and organophenols, general cytotoxicity testing of pure chemicals and chemical mixtures in particular for drug development testing, testing of food and drink products, cosmetics testing and identification of organisms in particular of fungal strains.

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